

Build OB7.2 RAX Release Info June 1, 2006

System Changes

- OS upgraded to RHE4
- RDBMS postgres 7.4.8 installed
- change in nfs mount point from /awips/hydroapps/lx to /awips/hydroapps.

Because of the change in OS all software had to be recompiled. Because of the move from Informix to PostgreSQL for the DBMS, software and scripts related to the Archive Database had to be modified.

In addition the RAX will be repartitioned. These numbers are subject to change. The proposed repartitioning is as follows:

Mount Point	RFC AX Partition	RFC AX Megabytes	
/	vg00/lvol01	1,000	
/boot	sda1	100	
/tmp	vg00/lvol02	500	
/usr	vg00/lvol03	9,000	
/var	vg00/lvol04	3,000	
swap	vg00/lvol05	2,000	
/awips/ops	vg00/lvol06	300	
/local	vg00/lvol07	2,000	
/rfc_arc	vg00/lvol08	2,000	
/rfc_arc_data	vg00/lvol09	5,000	
/data	vg00/lvol10 OR sda11		~324,000 (REMAINDER)

Total proposed allocated space: 348.9 GB
Size of disk(s): 350 GB

Database Changes

Changes were made to the RFC Archive Database schema based on what could and could not be carried over to PostgreSQL from the current RFC Archive DB as it resides in Informix. The following changes were made:

- The following tables (which took advantage of Informix's table fragmentation) are no longer fragmented: *pecrsep*, *pedrsep*, *peoossep*, *pedfsep* and *unkstnvalue*.
- The parameters of "extent size, next size" no longer exist when defining a table.
- The methodology on lock mode changes with the move to PostgreSQL.
- For the following tables the column name "desc" was changed to "descr": *opersnow17*, *segoper*, *opersacsma*, *operunithg*, *operapicont*, *area*, *areasens*, *cgroup*, *drain*, *fgroup*, *opertype*, *pos* and *seg*.

- For table *crest*, the column “old” was changed to “olddatum”.
- Table *riverstat* is removed in ob7; this table has been obsolete since ob5.
- Table *rating* changed in ob7 to accommodate a request from the National RATINGS team led by Dave Reed. Part of the change takes advantage of a feature that exists in PostgreSQL but does not in Informix, i.e. having a column as an array.
- Table *ratingshift* has a couple of changes due to the new rating table structure, these are: added column “src” and changed the primary key to be in sync with then *rating* table.
- Table *rivercrit*, selected columns changed from “float” to “numeric(10,2)”. These columns are: fis, action, alert, bank, flood, modflood, majflood and record.
- For table *pempsep* the column name “obstime” was changed to “cal_yr”... this makes it sync with the *pemrsep* table name for that column.
- For the SHEF data value tables, the column name “value” was changed to “datavalue”.
- For the NWSRFS mod tables, the column name “value” was changed to “modvalue”.
- For the table *prod*, the column name “max” was changed to “pmax”.
- Most of the changes related to data type were straight forward, however the data type used in Informix for date-time columns in several tables was not available in PostgreSQL. A different date-time data type was chosen for these columns, therefore some of the data unloaded from Informix had to be reformatted before it could be loaded in PostgreSQL. The changes are as follows:
 - Table *pedpsep*, the column “obstime” (which was “datetime year to month”) becomes data type of DATE, where the day is always 01.
 - Table *ingestfilter*, the column “obstime” (which was “datetime hour to second”) becomes data type of TIME.
 - For table *qadjust* the columns “b_date” and “e_data” (which were data type “datetime year to month”) become data type of DATE, where the day is always 01.
 - For tables *statesapicont*, *statessacsma* and *statessnow17*, the column “obstime” (which was data type “datetime year to hour”) becomes data type of TIMESTAMP, where minutes and seconds are always 00:00.
 - For the NWSRFS mod tables, when applicable, the columns “sdate”, “rdate”, “vdate” and “edate” (which were data type “datetime year to hour”) become data type of TIMESTAMP, where minutes and seconds are always 00:00.
 - For tables *datalimits* and *locdatalimits*, the columns “monthdaystart” and “monthdatend” (which were data type “datetime month to day”) become varchar(5).

New Applications/Scripts

The following applications/scripts are new because of the move to PostgreSQL RDBMS:

/rfc_arc/scripts/dbadmin

- run_vacuumdb
- adbpg.pl
- run_PGbkups
- cron_Pgbkups

/rfc_arc/bin/adbinit

- load_ingest
- load_locat

/rfc_arc/scripts/sysadmin

- run_bounce_postgres

/rfc_arc/lib

- perl_env.pm
- rax.profile

/rfc_arc/bin

- pgload
- dcextract.sh
- display_rc.sh
- fetchmods.sh
- get_params.sh
- get_states.sh
- group_parse.sh
- loadmods.sh
- nrdsdlyparse.sh
- process_flow.sh
- process_precip.sh
- process_stage.sh
- process_sw.sh
- process_temp.sh
- transfer_precip.sh
- transfer_txn.sh
- usgsdlyparse.sh

Applications/Scripts that go away

/rfc_arc/bin

- sdsyss

/rfc_arc/bin/adbinit

- run_load-data

/rfc_arc/bin/vfyprogs

- vfyprogs suite of applications (all files)

/rfc_arc/lib/cbrfc

- all files in this directory go away except for cbrfc.a

/rfc_arc/lib/process

- all files in this directory go away except for plib.a

/rfc_arc/scripts/dbadmin

- check_dbspaces
- check_extents
- run_archecker
- update-low
- update-stats

/rfc_arc/scripts/flatfiles

- mkdir-adb.ff1

/rfc_arc/scripts/sysadmin

- run_bounce_informix

Apps defaults token changes

The following is a change to the default value of an existing token:

```
anav_data : /data
```

The following are new tokens:

```
rax_pghost : ax  
adb_shef_pro_tmp_dir : $(adb_pro_que)  
adb_shef_raw_tmp_dir : $(adb_raw_que)  
adb_shef_raw_add_adjust : OFF
```

NFS Mount Point Change

```
nas1:/vol/awips_hdroapps => /awips/hydroapps
```

Note: This change will eliminate the need in previous builds to have duplicate copies of the .Apps_defaults and .Apps_defaults_site file on the RAX. It also allows the RAX shef_decode_raw and shef_decode_pro applications to read the IHFS shefdecoder's copy of the SHEFPARM file if the RFC so chooses.

The mount point /nas1:/vol/data_fxa/ipsan/hydro_adbs => /rfc_arc_data/q/raw is replaced with a symbolic link /rfc_arc_data/q/raw => /data/fxa/ispan/hydro_adbs where /data/fxa is a NFS mount point (nas1:/vol/data_fxa).

Directory Changes

The following directories and contents) go away:

```
/rfc_arc/bin/vfyprogs  
/rfc_arc/bin/tcl834
```

/rfc_arc/bin/adbinit/hdb
/rfc_arc/cfg/dbadmin
/rfc_arc/cfg/forms
/rfc_arc/cfg/misc
/rfc_arc/data/flatfiles
/rfc_arc/data/xref-data
rfc_arc/ds1
/rfc_arc/lib/abrfc
/rfc_arc/lib/shef
/rfc_arc/raxinstall
/rfc_arc/scripts/bkups-informix
/rfc_arc/scripts/dbadmin/sql
/rfc_arc/scripts/purgefiles/logs

The following are new directories:

/data/dbbackups
/rfc_arc/data/arcnav
/rfc_arc/logs/purgefiles

symbolic link changes

The following links go away:

/rfc_arc/bin/arctcl
/rfc_arc/bin/arctk
/rfc_arc/bin/arcwish
/rfc_arc_data/flatfiles

New links are:

/rfc_arc_data/q/raw => /data/fxa/ispan/hydro_adbs where /data/fxa is a NFS mount point (nas1:/vol/data_fxa).

Beyond the RAXUM Team

Not Included in this list, but may be in this release are bug fixes and enhancements to the following applications. These applications are maintained by OHD/HL/HSEB.

- shef_decode_pro
- shef_decode_raw
- national river verification software
- Informix to Postgres DB migration scripts